

Innovation and Entrepreneurs: Creative Destruction and Destructive Creation¹

“The intuitive mind is a sacred gift and the rational mind is a faithful servant. We have created a society that honors the servant and has forgotten the gift.” Albert Einstein

Abstract

In recent years the innovator has invariably been seen as an entrepreneur, wedded to a market philosophy that extends beyond any narrow confines of business or commerce, becoming all pervasive. With regard to the public and third sectors there was some justification for this as a useful corrective to an over-centralized concept of government which almost by definition precluded genuine innovation and enterprise. On the other hand, there was always the concomitant danger that the balance sheet would gradually efface any concerns with issues such as social justice and inequality. Recent state interventions resulting from the credit crunch and general concerns with financial liquidity, have dramatically altered the focus on the relationship and balance between the private, public, and third sectors; which in turn requires a revised understanding of innovation and entrepreneurship across all sectors of society, as well as highlighting the role played by ICT.

Keywords

Innovation; Entrepreneurship; Social Entrepreneurship; Civil Society; Liquid Modernity; Hannah Arendt; Zygmunt Bauman; Albert Camus; Peter Drucker; Karl Polanyi; Jean-Baptiste Say; Joseph Schumpeter;

Introduction

When Calvin Coolidge returned from a church service he told his wife that the sermon had been on the topic of sin. His wife asked him what the minister had said; opting for brevity, Coolidge replied; ‘On the whole he was against it’. Conversely, someone giving a presentation on creativity and innovation would, on the whole, be in favour of them. In recent years this auspiciousness has been virtually unchallenged, particularly with the concepts becoming increasingly bound up with a business-like orientation to the world in general. This is exemplified in the ways in which terms such as ‘social innovation’, ‘social enterprise’, and ‘social entrepreneur’ have gained currency and kudos. Innovation is seen as ‘a good thing’ – understood primarily in business terms; moreover this approach is taken to have applicability to virtually all aspects of everyday life.

During the period from the end of the bursting of the DotCom bubble (2001), which itself coincided with the dissipation of endeavours connected with Y2K (remember that?), until at least the latter half of 2007, discussion of innovation and creativity took place against a backdrop of seemingly endless economic growth, in part

¹ This is a shortened and slightly revised version of a paper ‘Two Paths for Innovation: Parvenu or Pariah’, accepted for IFIP 8.2 2009 ‘The Role of IS in Leveraging Intelligence and Creativity in SMEs’.

founded on increasingly sophisticated use of ICT/IS.² Indeed the DotCom bust began to recede, both in time and significance, against an apparently inexorable tale of innovation and growth that extended from the early 1990s into a future promising near-global prosperity. This was accompanied by a belief that the best way in which to foster innovation and creativity was to reduce regulation and centralized control, giving free rein – or reign – to the market; encouraging the private sector to participate in or even take control of what had traditionally been thought of as specifically public sector responsibilities.

By the middle of this decade there was a strong clamour for these trends to be expanded on a global scale; although there was an equally vociferous counter force which claimed that such unfettered markets lead to increased disparities in wealth, ever-increasing injustice and inequality, and significant propensities for unrest and discord. The former proved to be very much more powerful and influential – Davos won out over Porto Alegre.³ The result was an ever-shrinking public domain, while whatever remained of the public sector was increasingly market-oriented. This led to diminishing opportunities for collective and social action. Yet at the same time there was a general expansion in the number and role of NGOs and Civil Society Organizations [CSOs]. Governments were keen to reduce the size and scope of their public sector and associated expenditure, but the issues of social justice, equality, security and basic living standards did not disappear; on the contrary, in many cases they were exacerbated, often leaving the voluntary sector, NGOs and other CSOs as the last safety net or recourse for those cast aside as the welfare state, in any meaningful and universal sense, was replaced by something more akin to a Dickensian one.

Against this context the concepts of innovation and creativity took on important new features; specifically becoming wedded to the development and promotion of enterprise and entrepreneurialism in the public sector and civil society in general. Moreover such civil society projects and third sector initiatives came to be judged in terms of their ambition, innovation and initiative – criteria emanating from the domain of the commercial entrepreneur.

Schumpeter: The Entrepreneur as *Super-Rational* or *Non-Rational*?

Joseph Schumpeter provides some of the key arguments about the nature of entrepreneurship, and the ‘creative destruction’ that was the key feature of capitalism. Schumpeter’s concept of the entrepreneur changed in the course of his writing, but the essential point of the role of entrepreneurship did not. The onward drive of capitalism emanated from the disturbances caused by entrepreneurial activities. Without entrepreneurship there would be stasis. In systems predating

² For the purposes of this paper I shall treat the technological aspect (ICT) as coterminous with the systems aspect (IS). Thus phenomena such as ERP, CRM, E-Commerce, E-Government exemplify different forms of this combination.

³ Davos being the location of the annual gathering of the rich and powerful – The World Economic Forum <http://www.weforum.org/en/index.htm>; Porto Alegre on the other hand hosts The World Social Forum, and is itself famous as a city that has fostered participatory budgeting and aims at redistributive democracy <http://www.portoalegre2002.org/homepage.html>.

capitalism, entrepreneurship relied on specific individuals upsetting the *status quo* and releasing new potentialities; even in early capitalism this was still very much the case. Entrepreneurs were those people who created new possibilities, often going against conventional and accepted ideas. Although once the new ideas became the conventional ones, the entrepreneur might cease to act in this manner and become more of an executive or administrator; or might continue to act the entrepreneur, but now in contrast to the new form of what constituted the normal and the routine 'the distinctive element is readily recognized so soon as we make clear to ourselves what it means to act outside the pale of routine. The distinction between adaptive and creative response to given conditions may or may not be felicitous, but it conveys an essential point; it conveys an essential difference.' (Schumpeter, quoted in Langlois 2002)

Some commentators such as Langlois (2002) have drawn the distinction between two, conflicting strands in Schumpeter's work – either arguing that they coexist throughout his work, or differ between early and later writings: One strand centres on the argument that the spirit of the entrepreneur⁴ will gradually become obsolete as rational calculation encroaches further into everyday activities. If our knowledge increases, we can become more readily aware of the possibilities for innovation, and so rely less on the insights of the entrepreneurs. This implies that entrepreneurial insights make up for gaps or failings in current knowledge, so to an extent the entrepreneur is not only more insightful, but also more knowledgeable – i.e. *supra*-rational. Thus according to this view, potential innovations become more apparent with more knowledge. This implies a divergence between innovation and entrepreneurship, since as innovation, or the potential for innovation, increases, the need for or the call for entrepreneurship decreases.

The second strand is the exact opposite of this. Here the *spirit of the entrepreneur* will always be needed, because the ability to see things differently is precisely at odds with things as they are. This will apply however well-informed people might be. The key implication is that entrepreneurial insight is something *non*-rational; knowledge and rational calculation might be available, but there will always be a demand to go beyond the planned and the calculated, or at least to take an unorthodox and unconventional perspective.

This tension can be found in many writings on entrepreneurship and innovation; as well as embedded in many national and governmental policies designed to encourage such activities. Is the source of innovation and the entrepreneurial spirit to be found *within* the corporations and multi-nationals, with their plans and strategies centred on research departments and R&D budgets, or is this large-scale organization inimical to precisely these tendencies? Are the innovations of the future primarily to be found *outside* these large-scale organizations? Are large-scale organizations able to foster the process of innovation? Are SMEs or even SMMEs the best sources of innovation, or should the sources and processes of innovations be

⁴ Schumpeter coined the term *Unternehmergeist* – usually translated as 'spirit of the entrepreneur' – although *entrepreneurship* seems a less clumsy form.

sought beyond the confines of the private sector? Moreover how can the resources of the public and private sectors best be marshalled to ensure that such activities are encouraged and fostered? Are strategic plans designed to encourage innovation a contradiction in terms?

Entrepreneurialism – Systematized or Situated?

Drucker, writing in the 1980s and 1990s, argued in favour of systematizing entrepreneurship and innovation. He identified the five elements of the process of innovation, and linked these with a framework of opportunities for innovation set against an account of entrepreneurship practices and strategies.

It is noteworthy that Drucker omits any mention of invention, preferring to focus on the term innovation. Yet from the outset any reader might be confused by his various uses of the term. He defines innovation as

[a] specific tool of entrepreneurs, the means by which they exploit change as opportunity for a different business or a different service. It is capable of being presented as a discipline, capable of being learned, capable of being practised. Entrepreneurs need to search purposefully for the sources of innovation, the changes and their symptoms that indicate opportunities for successful innovation. And they need to know and to apply the principles of successful innovation. (1994: 17)

This clearly defines innovation as a process and a tool; one that entrepreneurs have to understand and employ. But what does Drucker mean by the term 'successful innovation'? In the context of a discussion of innovation, creativity, and entrepreneurship surely a successful innovation is one that has achieved success – however that might be defined – precisely after being subject to some entrepreneurial activity. This might be accomplished through a re-combination of resources to provide higher utility and greater effectiveness (Jean-Baptiste Say's concept of the entrepreneur), or as part of the process of creative destruction (Schumpeter). If entrepreneurship is the activity that ensures that an innovation becomes successful, then Drucker's invocation is circular: Entrepreneurs have to act as entrepreneurs. On the other hand the first part of the extract implies that innovation itself is something distinct from entrepreneurship; the entrepreneur has to 'search purposefully' for the sources of innovation, and perhaps for the innovations themselves. The net result is that Drucker seems unable to distinguish between his two terms; hence his inability to separate them in one of his concluding remarks about the three factors which together 'make up *innovation and entrepreneurship*' (p233 – stress in the original) - these are purposeful innovation, entrepreneurial management, and entrepreneurial strategies.⁵

Significantly Drucker implies that his hybrid innovation-and-entrepreneurship is predominantly located within organizations – primarily in the private sector.

⁵ Denning (2004) argues that Drucker does have a clear distinction – innovation is the search for opportunities, which then are transformed into practices and taken to the market place; entrepreneurship is the institutionalization of the practice of innovation in an organization.

Although he does seek to distance these activities from 'centralized planning' and so allow for individual idiosyncrasies. But largely the assumption is that the entrepreneurial spirit is one to be systematized within an organizational context; by default, the private corporate kind. The argument for this purposeful, systematized entrepreneurialism is ultimately incoherent; although it has been influential since it has come from the pen of Peter Drucker.

The Current Context – Liquid Modernity: Innovation as an End in Itself

Drucker used the term 'the entrepreneurial society', but offered nothing further other than that it would, he hoped, be a social context which encouraged and enhanced innovation-and-entrepreneurship. Say saw the entrepreneur as '*necessary for the setting in motion* of every class of industry whatever; that is to say, the application of acquired knowledge to the creation of a product for human consumption' (stress added). Schumpeter made similar claims, seeing entrepreneurship as the motor that propelled capitalism. The common implication is that without this impetus there would be stasis, or at best only restricted movement. This may have been the case in the past, but the current context is markedly different.

Zygmunt Bauman has labelled our current era as 'Liquid Modernity', which 'sets itself no objective, draws no finishing line, and assigns the quality of permanence solely to the state of transience. Time flows; but it no longer marches on to any destination'. Bauman's imagery of liquidity draws its resonance from *The Communist Manifesto* with its declaration – 'All that is solid melts into air, all that is holy is profaned, the need of a constantly expanding market for its products chases the bourgeoisie over the entire surface of the globe, it must nestle everywhere, settle everywhere, establish connections everywhere.' (see Bauman 2000: *Foreword*). The next sentence, not quoted by Bauman, continues thus: 'All fixed, fast frozen relations, with their train of ancient and venerable prejudices and opinions, are swept away, all new-formed ones become antiquated before they can ossify.'

Without seeking, at this juncture, to offer any extended account of Bauman's recent work, the key points for present purposes are that; society may no longer need the powers of impulsion and momentum of the entrepreneur – at least not in the ways Say, Schumpeter, and Drucker envisaged them; the process of innovation needs to be re-examined, re-conceptualized and re-evaluated; our understanding of entrepreneurialism and the role of the entrepreneur will have to be revised and enhanced. This was already evident once one grasps Bauman's arguments, but is more so in the light of the sub-prime crisis and its aftermath.

In the context of Liquid Modernity innovation is not the exception but the rule. There is an incessant demand for something new, purely because there is a craving for novelty, which, once delivered, rapidly becomes outdated; fit only for the scrap heap. Drucker's dream of an 'entrepreneurial society' has become a nightmarish reality, akin to Italo Calvino's city of *Leonia* which 'refashions itself every day'; with all the remains of yesterday 'encased in spotless plastic bags' placed carefully on the sidewalk waiting for the refuse collectors.

Drucker's viewed such a society comprising 'purposeful innovation, entrepreneurial management, and entrepreneurial strategies'. In the current context *innovation* is indeed purposeful; paradoxically it has the prime purpose of being 'innovative', rather than meeting any actual need: The means has become an end in itself. Schumpeter's concept of *creative destruction* becomes a cycle of creation-production-consumption-disposal. This applies not only to the products and services themselves, as in *Leonia*, but also to the people and organizations involved in bringing them to market.⁶

This might be taken to mean that there is now a free-for-all, with many innovations vying for market space to the ultimate benefit of all. This is often cited as one of the *raison d'être* for policies that encourage small start-up companies, since they have the agility to respond swiftly to rapidly changing contexts, producing innovative ideas and strategies. But as Howells and others demonstrate there is a tendency for innovations to become institutionalized inside large and powerful companies. This is something akin to Schumpeter's belief that eventually there will be a declining role for the entrepreneur, as knowledge and rational calculation are perfected; although in the context of research and innovation in corporations in the late 20th and early 21st centuries this is not based primarily on the nature of knowledge but on control of resources, expertise and R&D budgets.⁷ Thus even the ability to develop competence, in Winston's sense, may be outside the scope of all but a few with access to the requisite resources: Performance is virtually unattainable by those outside the relevant institutional settings.

Innovating with ICTs

There has been a steady clamour for policies and direction aimed at the ways in which creativity and innovation can be enhanced and nurtured through application and use of ICTs. This continues unabated despite, or perhaps as a consequence of, the implicit role of ICTs in the current context of the credit-crunch and general economic melt-down. The optimistic lexicon of business-as-usual has now ineluctably been overtaken by events. It may be that prevailing conditions are conducive to agility and change as long as the correct strategies and models can be articulated; in many cases such opportunities being rendered feasible through use of ICTs. The experts in such technologies are no more able to foresee a way ahead than the economic and finance experts who got us here in the first place; but even so, it is critical that we begin to dismantle the current conceptual amalgam, question the implied linkages and open up issues which might otherwise be neglected or avoided.

⁶ And unlike the people of *Leonia*, the waste and detritus is not placed neatly into plastic bags as Sennett (1999) and Bauman (2004) make all too clear – the 'waste' from liquid modern society includes people as well as out-dated consumer goods.

⁷ This is not to rule out the role of serendipity and individual insight, but in many areas – e.g. medical research, bio-informatics, aeronautics, etc. – it is almost impossible to undertake anything beyond pure speculation and ideation outside the confines of the major corporations involved in those areas. Is this the way ahead for other aspects of research and innovation? It has even be noted that the outputs of R&D endeavours in some organizations produced inventions with no obvious market, until one is later created: And even inventions which are solutions to 'problems' that did not exist prior to the invention itself.

The relationships between creativity, invention, innovation, and entrepreneurship, and the role of ICTs, need to be set against the current social context of liquid modernity – currently going through a crisis of *illiquidity*; also offering a new understanding of Drucker, Say, and Schumpeter, amongst others. First it must be stressed that creativity is at work at all times and emanates from all manner of sources. Occasionally it finds form in invention, and some inventions become innovations, in line with Winston's concept of the transition from competence to performance. The arguments of Winston and Howells also have a further implication that needs to be grasped: Much creativity remains firmly wedded to the creator, never leading to innovation or a move into the market. This is well understood by Manuel Castells and Daniel Bell, both of whom use Harvey Brooks' definition of technology – 'the use of scientific knowledge to specify ways of doing things in a *reproducible* manner' (stress added). If an invention or ideation cannot be reproduced, in both the technical and economic senses of the term, it will not become an innovation; yet that is a necessary, but not sufficient condition.

In a society centred on the self-regulating market the transition from invention to innovation will necessarily involve entrepreneurship – in both Say's sense of the 'master-agent or adventurer' and Schumpeter's of 'creativity' rather than 'adaptivity'. But as Winston and Howells argue, such forces operate against a context of socio-economic characteristics that can impel or impede the move from competence to performance. In the current and extreme form of market society – Liquid Modernity – this entrepreneurship or adventurism runs amok. Everyone is encouraged, even prompted, to become an entrepreneur or a master-agent. The most successful being those able to find new ways of combining or *leveraging* the 'natural' resources of market society; what Karl Polanyi⁸ terms the fictitious commodities of land, labour and capital. The result is that creativity, in its affirmative and imaginative, actually becomes divorced from innovation and entrepreneurship. The paradigmatic innovators-cum-entrepreneurs of early 21st century liquid modernity are those financiers, hedge-fund managers, whiz-kids and maestros of arbitrage and other forms of transactional prestidigitation who have brought us to the current crisis. They have indeed transmuted value in Say's terms, shifting economic resources from lower into higher productivity and greater yield, but not in the substantive fashion that Say had in mind. Unfortunately the transmutation has proved as chimerical as that of the alchemists. There is no ultimate consumer whose needs are satisfied; only the chump finally left holding the 'assets' that are now revealed to be liabilities. The transmutation, if any, has been from lead to gold, rather than vice versa.

To an extent much of this innovation and entrepreneurialism, if not driven by the opportunities afforded by ICT, has certainly benefited from the technology that

⁸ Karl was the brother of Michael (*Personal Knowledge*), and uncle of John (Nobel Laureate for Chemistry). It would be useful if the IS world paid at least as much attention to Karl's work as they have to Michael's; and even better if the ideas of both were understood in a more nuanced manner. Michael's concept of tacit knowledge has been dreadfully misconstrued in much of the work on knowledge management.

facilitates and promotes the marshalling and consolidation of huge amounts of information, round-the-clock and near-instantaneous trading, infinitesimal transaction costs, all set against a global financial system that knows no boundaries and seemingly allows or even encourages evasion of all impediments and controls.⁹ Those advocating and encouraging the use of ICT for all manner of improvements in efficiency and effectiveness have been far too ready to adopt and accept the breathless language of relentless encroachment of the market. In the IS/ICT academy we have been complicit with the chimerical innovators-cum-entrepreneurs who have proved to be the exact opposite of Schumpeter's concept. Rather than being creative and *supra*-rational, we are in danger of being *supra*-adaptive and conventional; following the logic of the market in fictitious commodities, and ultimately producing fictitious and spectral innovations.

The Entrepreneur: *Pariah* or *Parvenu*?

The true role of the entrepreneur is to see things differently. Yet the entrepreneurs and innovators of liquid modernity appear to be the ultimate conformists; taking the concept of innovation as an end in itself to new extremes. In an age where we are all pressed to recreate ourselves on an almost daily basis, the entrepreneur has become the rule rather than the exception; and innovation has become the commonplace, the routine and the humdrum: Oxymoronic as that may appear. This can be understood in terms of Hannah Arendt's concepts of the pariah and the parvenu (1951), and Albert Camus' distinction between two forms of rebellion (1951).

For Arendt the parvenu is an upstart and a social climber: Someone who seeks to conform and so adapts to the established norms of the surrounding milieu; often excelling in performing whatever it is that is most highly regarded or rewarded. The parvenu is devoid of political ideas or wider social agendas, being entirely focused on personal interests and aggrandisement. The pariah on the other hand stands outside and apart from 'the conventional wisdom'; either by choice, or out of necessity: Arendt's initial discussion of the terms is couched in the context and her own experience of being Jewish in Germany in the 1920s and 1930s. The pariah sees things differently, which is both a precondition for and a result of being a pariah. The overall effect is that pariahs see the bigger picture, the social whole; often leading to utopianism, advocacy of social change, and political ideas that go beyond personal interests. The pariah often becomes the rebel.

Camus' discussion of rebellion brings out a further critical distinction, derived from his experience and observation of those who engaged with communism in the middle of the 20th century. Those who saw the need for social change in terms aiming at perfection of society, based on some set of 'absolute values', were likely to follow even the most dictatorial and totalitarian tendencies and actual regimes. Camus termed this 'revolution' or 'historical rebellion'. While those who recognized the absurd, while still striving for change and improvement, engage in 'metaphysical rebellion', based on a lucidity that accepts the absurdity of the drama of social existence and the 'unreasonable silence of the world'.

⁹ And if that fails, there is always straight forward mendacity, larceny, and dishonesty.

Today we might understand Camus' concept of 'the absurd' in terms such as 'uncertainty', 'complexity' or 'chaos'; and this resonates with Bauman's Liquid Modernity particularly if, as I have argued elsewhere, the fluid metaphor is extended to incorporate a consideration of 'turbulence' (Bryant, 2007; Bryant et al, 2007). In terms of the current discussion, acceptance of absurdity or complexity effectively subverts any idea that perfection of knowledge and rationality will result in the demise of innovation and creativity – a reading of Schumpeter that sees the entrepreneur as *supra*-rational – and instead heavily favours the alternative reading – the entrepreneur as *non*-rational. This leads to a focus on serendipity, rather than any misguided expectation of perfection or certainty.

So in the light of the credit-crunch, and the continuing exposure of the ways in which 'rational calculation' lay at the base of the fiasco in which we are all mired, it can be seen that many of the self-proclaimed entrepreneurs are parvenus rather pariahs; while the chorus of supporters, until recently urging general emulation of their efforts, are historical rebels quick to proclaim perfection and nirvana. To an extent this was understandable given the realities of Soviet-style Communism and its final demise, which exacerbated the enthusiasm for and growth of market society; on several occasions such has been its supremacy that many have heralded a new utopia of frictionless growth, universal prosperity, the end of boom and bust. Of course there were warnings from some sources, and even strong indications of precedents. J K Galbraith, one of the most astute writers on economics, often warned that when people herald a new age of universal prosperity it is time to take cover. Bauman has referred to Emerson's dictum that when skating on thin ice, the only strategy is speed. What we now realize is that we are like those cartoon characters who continue on their way beyond the edge of the cliff, only falling once they look down to see that they have no visible means of support.

The Agora – The Social Entrepreneur, Social Innovation & Civil Society

What is needed now is not more-of-the-same, the entrepreneur as parvenu; but new ways of seeing, the entrepreneur as pariah. This will involve a re-orientation of what is actually involved in creativity and innovation, stressing the importance of fostering genuinely new ways of seeing in a re-invigorated social context drawing on the possibilities and propensities of ICT. In recent times the concept of a third sector, incorporating charities, voluntary organizations and NGOs, has come to the fore; as distinct from the private and public sectors. In some way this is akin to the *Agora*; initially a specific location in Athens, but later a conceptual space which as Bauman explains was

neither private nor public, but more exactly private and public at the same time. The space where private problems meet in a meaningful way – that is, not just to draw narcissistic pleasures or in search of some therapy through public display, but to seek collectively managed levers powerful enough to lift individuals from their privately suffered misery; the space where such ideas may be born and take shape as the 'public good', the 'just society' or 'shared values'. (1999, pp.3-4)

For Bauman, the history of modern societies has been a long war of attrition 'launched against the agora from the side of the ecclesia'. In other words there has been a sustained effort to curtail or eradicate any space in which issues pertaining to the collective, the shared, the communal, might be raised and discussed. Concomitant with Polanyi's 'Great Transformation'¹⁰, the encroachment of market society has resulted in the subversion of any claims for legitimacy for the social and communal, fostering the expansion of the operation and calculus of the market flooding into all aspects of human existence – social and personal, the public and the private. Yet the novelty of this as part of modernity and liquid modernity has been in its intensity rather than its actual occurrence, since, as Arendt (1958) pointed out, the pressure from the *ecclesia* often took the form of efforts to transform the *agora* 'into an assemblage of shops like the bazaars of oriental despotism'.

If ICT has anything to offer in the present crisis it is the ways in which new technologies present opportunities for civil society to flourish; the internet, social networking, the *blogosphere*, *wikis* and so forth might well be the bases for a renewed if virtual *agora*: *Agora 2.0*. But the actual motivation behind some of this technology, particularly the Open Source movement, in fact exemplifies the ways in which the Great Transformation has continued to exert its power. Eric Raymond's *The Cathedral and The Bazaar* is rightly regarded as the *de facto* manifesto of the Open Source movement. Yet as Raymond (1997) noted some years later, 'I very nearly called this paper *The Cathedral and the Agora*, the latter term being the Greek for an open market or public meeting place.' In a brief email exchange with Raymond it became clear that his concept of the *agora* was profoundly market-oriented and bazaar-like. Thus he distinguished between the 'monetary market' and the market *per se* which, quoting Drexler and Miller (1988), he explained is 'the sum total of all voluntary interactions': Also stating that the *agora* is a subset of the market.

Raymond is, of course, entitled to this view; but it should not preclude consideration of the alternative on offer from Arendt and Bauman amongst others. More importantly, if we take up the challenge implicit in Arendt's and Bauman's critique we can see that discussions around ICT-based innovation should indeed engage with the concerns of civil society. In this sense the real social entrepreneurs include those who have sought to counteract the forces of market society; often by giving impetus to the countervailing forces of the double movement. So Beveridge, Bevan, Brandt should be regarded as exemplary figures – and it is left to the reader to suggest others of this ilk. Polanyi singled out Robert Owen in this regard, someone who understood that *society* was the prime phenomenon; wanting to harness the state and the machine to positive effect. He attacked Christianity because it displaced society by individualization. 'He grasped the fact that what appeared primarily as an economic problem was essentially a social one.' He advocated the self-protection of society, something that, Polanyi observes, was in fact incompatible with the economic system itself.

¹⁰ A topic that is explained in more detail in the longer version of this paper.

Polanyi offers a glimpse of what needs to be done to enact some form of transformation that goes beyond policies that amount to little more than cosmetic forms of more-of-the-same. Howells correctly alludes to the socio-cognitive aspects of innovation, but he fails to say whether the socio-cognitive change comes before or after the innovation: I suspect he would argue that either sequence is possible. In terms of the current crisis, however, the socio-cognitive change has to start off the process of innovation, with people beginning to grasp that the foisting of the market on society as a whole did not occur naturally, but was the result of a series of deliberate policies and transformations along the lines suggested by Polanyi.

What we are now witnessing is state intervention with a vengeance; but largely on behalf of the rich. This might be simply a case of business-as-usual – albeit in unusual circumstances – but it might also be that there is no way for genuinely new ways of seeing things to find an audience and serious consideration. The babble of the internet remains just that, unless ways can be found to ‘leverage’ the technology and the participants to a more authoritative level: That will be genuinely ICT-driven innovation; truly creative uses of technology to foster social entrepreneurship that can be encouraged to flourish and have profound effect: Creative destruction wedded to Destructive creation.

Crises represent opportunities for entrepreneurs to flourish, but the present one also offers the prospect to change the way in which innovation, creativity, and entrepreneurship are envisaged and nurtured. The literal translation of *Der Unternehmer* is The Undertaker; and it may now be time to inter one form of innovation in favour of another: Or as Einstein noted in the quote above; it may be time for us to attend more to the gift and less to the servant.

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